

Patent Claims

Sub A1 } 1. A liquid crystal display having two opposed sub-
strates (1), a liquid crystalline medium (2) contained between
the substrates, and a plurality of electrodes (5) arranged on
5 the substrates to produce a multiplicity of pixels (11),
characterized in that the electrodes (5) are configured in such
fashion that the pixels (11) have round contours.

2. The liquid crystal display as claimed in the preced-
ing claim, wherein the electrodes (5) are configured in such
10 fashion that the pixels (11) have roughly circular contours.

3. The liquid crystal display as claimed in any one of
the preceding claims, wherein the electrodes (5) possess bulg-
ing sections (6) with a rounded, in particular circular-segmen-
tal, outer contour, as well as connecting sections (9) linking
15 said bulging sections in a string-type configuration, with the
relative orientation of the electrodes (5) disposed on differ-
ent substrates (1) being such that their bulging sections (6)
lie opposite each other, being in particular turned through
about 90° relative to one another and adding up to form a
20 pixel.

4. The liquid crystal display as claimed in claim 3,
wherein the bulging sections (6) form diametrically opposed
sectors (7), particularly circular sectors, with a sector angle
(α) of at least about 90 degrees, preferably about 90 degrees.

5. The liquid crystal display as claimed in any one of
the preceding claims, characterized in that the bulging sec-
tions (6) of the electrodes (11) which are complementary to
form pixels (11) are configured in such fashion that in the
presence of an offset of the substrates (1) in the two axial
25 directions, which is due to manufacturing tolerances, pixels
30

(11) are still producible whose outer contour includes circular sections and corners with obtuse included internal angles.

6. The liquid crystal display as claimed in claim 5, characterized in that the corners of the outer contour or the tangents applied to the corners define between them an internal angle of between 90° and 180° , in particular an internal angle of between 120° and 180° .

7. The liquid crystal display as claimed in one of the two preceding claims, wherein the connecting sections (9) have an enlarged cross-section (10) outside an area of overlap with the opposite electrode (5).

8. The liquid crystal display according to the prior-art portion of claim 1, wherein the electrodes (5) are configured in such fashion that the pixels (11) have a contour in the form of a polygon with more than four sides, in particular an essentially octagonal contour.

9. The liquid crystal display as claimed in the preceding claim, wherein the electrodes are configured in such fashion that the pixels (11) have a contour in the form of a polygon with rounded corners.

10. The liquid crystal display as claimed in one of the two preceding claims, wherein neighboring sides of the polygon define between them an internal angle of ≥ 100 degrees, preferably ≥ 120 degrees.

11. The liquid crystal display as claimed in any one of the preceding claims, wherein the electrodes (5) possess bulging sections (6) with a polygonal outer contour, as well as connecting sections (9) linking said bulging sections in a string-type configuration, with the electrodes (5) disposed on

~~different substrates (1) being configured such that their bulg-
ing sections lie opposite each other.~~

12. The liquid crystal display as claimed in any one of
the preceding claims, wherein the pixels (11) are arranged in a
5 raster, with the raster distance between neighboring pixels
amounting to between 0.5 mm and 1 mm, preferably between 0.6 mm
and 0.8 mm, being in particular of the order of about 0.7 mm.

13. The use of the liquid crystal display according to
any one of the preceding claims in electrical appliances for
10 personal use, in particular in blood pressure monitoring
devices.

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